

AMENDMENTS TO THE CLAIMS:

Claims 8-19, 27-38, 46-48, 58-61, 64-67, 70 and 71 are canceled without prejudice or disclaimer.

1. (Currently amended) A method of collecting information used for adjustments with an information collecting server in a radio communication system connected to at least one mobile radio terminal for performing user communications, said method comprising:

in said mobile radio terminal,

monitoring a communication status of a communication connection using a traffic channel, wherein said communication status corresponds to whether or not the mobile radio terminal has an existing communication connection using the traffic channel which satisfies predetermined criteria related to one or more of said adjustments;

detecting as a trigger when a change of said communication status has satisfied a predetermined condition of one of said predetermined criteria, said predetermined condition being predefined as useful information related to at least one adjustment within a service area of said radio communication system;

acquiring a reception status of a radio signal;

acquiring a coordinate position of said mobile radio terminal; and

sending information including said reception status and said coordinate position to said information collecting server.

2. (Previously Presented) A method according to claim 1, wherein said predetermined condition comprises an occurrence of a forced disconnection of the user communication.

Application No. 10/700,483

Client Docket: NEC03P166-RIa (Attorney Docket: WAK.119)

3. (Previously Presented) A method according to claim 1, wherein said predetermined condition comprises an occurrence of a handover failure.

4. (Previously Presented) A method according to claim 1, wherein said predetermined condition comprises a lowering of a throughput of said user communication below a predetermined threshold value.

5. (Original) A method according to claim 1, wherein said predetermined condition comprises a call which is made.

6. (Previously Presented) A method according to claim 1, further comprising:
in said information collecting server, sending value information indicative of a value given for said measured information, which is provided to said mobile radio terminal when said measured information is received; and

in said mobile radio terminal, displaying the value indicated by said value information when said value information is received.

7. (Original) A method according to claim 1, wherein said radio communication system comprises a CDMA radio communication system.

8-19. (Canceled)

20. (Currently amended) A system for collecting information used for adjustments in a radio communication system for performing user communication, comprising:

at least one mobile radio terminal that monitors a communication status of a communication connection using a traffic channel, wherein said communication status corresponds to whether or not the mobile radio terminal has an existing communication connection using the traffic channel which satisfies predetermined criteria, and if a trigger is detected when a change of said communication status has satisfied a predetermined condition of one of said predetermined criteria, acquires a reception status of a radio signal and a coordinate position of the mobile radio terminal, and sends information including said reception status and said coordinate position; and

an information collecting server that receives said information from said mobile radio terminal,

wherein the information which has been received is recorded as collected information as data for developing a service map of said radio communication system, each said predetermined criterion providing data for a different service map.

21. (Previously Presented) A system according to claim 20, wherein said predetermined condition comprises an occurrence of a forced disconnection of the user communication.

22. (Previously Presented) A system according to claim 20, wherein said predetermined condition comprises an occurrence of a handover failure.

23. (Previously Presented) A system according to claim 20, wherein said predetermined condition comprises a lowering of a throughput of said user communication below a predetermined threshold value.

24. (Original) A system according to claim 20, wherein said predetermined condition comprises a call which is made.

25. (Previously Presented) A system according to claim 20, wherein,
when said measured information is received, said information collecting server sends value information indicative of a value given for said information, which is provided to said mobile radio terminal, and
wherein when said value information is received, said mobile radio terminal displays the value indicated by said value information.

26. (Original) A system according to claim 20, wherein said radio communication system comprises a CDMA radio communication system.

27-38. (Canceled)

39. (Currently amended) A mobile radio terminal for sending information used for determining adjustments in a radio communication system for performing user communications to an information collecting server collecting said adjustment information, said mobile radio terminal comprising:

a communication status acquisition unit that acquires a communication status of a communication connection using a traffic channel, wherein said communication status corresponds to whether or not the mobile radio terminal has an existing communication connection using the traffic channel which satisfies predetermined criteria, each criterion of said predetermined criteria having been predefined as a condition related to one of maintaining or improving service within a service area of said radio communication system;

a reception status acquisition unit that acquires a reception status of a radio signal;

a positional information acquisition unit that acquires a coordinate position of the mobile radio terminal; and

a control unit, triggerable when a change of said communication status acquired by said communication status acquisition unit has satisfied a predetermined condition of one of said predetermined criteria, ~~that instructs~~ instructing said reception status acquisition unit to acquire said reception status and instructing said positional information acquisition unit to acquire said coordinate position, and, when said reception status and said coordinate position are acquired, sending information including said reception status and said coordinate position to said information collecting server.

40. (Previously Presented) A mobile radio terminal according to claim 39, wherein said predetermined condition comprises an occurrence of a forced disconnection of the user communication.

41. (Previously Presented) A mobile radio terminal according to claim 39, wherein said predetermined condition comprises an occurrence of a handover failure.

42. (Previously Presented) A mobile radio terminal according to claim 39, wherein said predetermined condition comprises a lowering of a throughput of said user communication below a predetermined threshold value.

43. (Original) A mobile radio terminal according to claim 39, wherein said predetermined condition comprises a call which is made.

44. (Previously Presented) A mobile radio terminal according to claim 39,
wherein, when said information is received, said information collecting server sends value information indicative of a value given for said information, which is provided to said mobile radio terminal, and
wherein, when said value information is received, said mobile radio terminal displays the value indicated by said value information.

45. (Original) A mobile radio terminal according to claim 39, wherein said radio communication system comprises a CDMA radio communication system.

46-48. (Canceled)

49. (Currently amended) A mobile radio terminal for sending information used for adjustments in a radio communication system for performing user communications to an information collecting server collecting data for maintenance and adjustment activities for a

service area coverage of said radio communication system, said mobile radio terminal comprising:

a communication status acquisition unit that acquires a communication status of a communication connection using a traffic channel, wherein said communication status corresponds to whether or not the mobile radio terminal has an existing communication connection using the traffic channel which satisfies predetermined criteria;

a trigger information reception unit that receives a trigger command from said information collecting server;

a reception status acquisition unit that acquires a reception status of a radio signal;

a positional information acquisition unit that acquires a coordinate position of the mobile radio terminal; and

a control unit, triggerable when said communication status acquired by said communication status acquisition unit has satisfied one of a predetermined condition of one of said predetermined criteria ~~and~~ or said trigger command is received by said trigger information reception unit, ~~that instructs~~ instructing said reception status acquisition unit to acquire said reception status and instructing said positional information acquisition unit to acquire said coordinate position, and, when said reception status and said coordinate position are acquired, sending information including said reception status and said coordinate position to said information collecting server.

50. (Previously Presented) A mobile radio terminal according to claim 49, wherein said predetermined condition comprises an occurrence of a forced disconnection of the user communication.

51. (Previously Presented) A mobile radio terminal according to claim 49, wherein said predetermined condition comprises an occurrence of a handover failure.

52. (Previously Presented) A mobile radio terminal according to claim 49, wherein said predetermined condition comprises a lowering of a throughput of said user communication below a predetermined threshold value.

53. (Original) A mobile radio terminal according to claim 49, wherein said predetermined condition comprises a call which is made.

54. (Previously Presented) A mobile radio terminal according to claim 49, wherein when said information is received, said information collecting server sends value information indicative of a value given for said information, which is provided to said mobile radio terminal, and wherein, when said value information is received, said mobile radio terminal displays the value indicated by said value information.

55. (Original) A mobile radio terminal according to claim 49, wherein said radio communication system comprises a CDMA radio communication

56. (Previously Presented) The method according to claim 1, wherein said acquiring a reception status further includes acquiring at least one of a received signal quality and a received signal intensity of a common channel.

57. (Previously Presented) The method according to claim 1, wherein said acquiring said coordinate position information further includes acquiring coordinate information of said mobile radio terminal by using GPS (Global Positioning System).

58-61. (Canceled)

62. (Previously Presented) The system according to claim 20, wherein said acquiring a reception status further includes acquiring at least one of a received signal quality and a received signal intensity of a common channel.

63. (Previously Presented) The system according to claim 20, wherein said acquiring said coordinate position information further includes acquiring coordinate information of said mobile radio terminal by using GPS (Global Positioning System).

64-67. (Canceled)

68. (Previously Presented) The mobile radio terminal according to claim 39, wherein said acquiring a reception status further includes acquiring at least one of a received signal quality and a received signal intensity of a common channel.

69. (Previously Presented) The mobile radio terminal according to claim 39, wherein said acquiring said coordinate position information further includes acquiring coordinate

information of said mobile radio terminal by using GPS (Global Positioning System).

70-71. (Canceled)

72. (Previously Presented) The mobile radio terminal according to claim 49, wherein said acquiring a reception status further includes acquiring at least one of a received signal quality and a received signal intensity of a common channel.

73. (Previously Presented) The mobile radio terminal according to claim 49, wherein said acquiring said coordinate position information further includes acquiring coordinate information of said mobile radio terminal by using GPS (Global Positioning System).

74. (Previously presented) The method of claim 1, wherein said sending information to said information collecting server occurs immediately upon said trigger, said predetermined condition having been preset to permit said information to be sent to said information collecting server without said mobile radio terminal having first lost said existing communication connection.

75. (Previously presented) The method of claim 1, wherein said trigger results from a condition causing a loss of said existing communication connection and said sending information to said information collecting server occurs immediately upon regaining a new communication connection.

76. (Previously presented) The method of claim 1, wherein said predetermined criteria comprises a plurality of conditions causing triggers for said sending information to said information collecting server.

77. (Currently amended) The method of claim 76, wherein each said condition permits a different mapping condition for said radio communication system, thereby permitting a plurality of maps for an area serviced by said radio communication system to be developed.

78. (Previously presented) The method of claim 77, further comprising:
retrieving data stored in said information collecting server; and
using said retrieved data to develop at least one map for said area serviced by said radio communication system.

79. (Previously presented) The method of claim 76, said plurality of conditions comprising at least two of a preset condition for:
a received signal power vs. interference power ratio per chip (E_c/I_o) indicative of a received signal quality of a common pilot channel;
a received signal intensity in a common pilot channel;
an event of a forced shut down of a communication;
an indication that said mobile radio terminal is unable to make an outgoing call;
an indication of a handover failure;
an indication of a level of a communication throughput; and
an indication of a start of a call.

80. (Currently amended) A method of reporting measurement information measured by a mobile radio terminal, said method comprising:

monitoring a communication status of the mobile radio terminal;

detecting a deterioration of the communication status; and

reporting measurement information corresponding to the detected deterioration,

wherein the measurement information includes information relating to at least one of a reception quality and an intensity of a radio signal and information relating to a location of the mobile radio terminal.

81. (Currently amended) A mobile radio terminal capable of reporting measurement information, said mobile radio terminal comprising:

a first unit to monitor a communication status;

a second unit to detect a deterioration of the communication status; and

a third unit to report measurement information corresponding to the detected deterioration,

wherein the measurement information includes information relating to at least one of a reception quality and intensity of a radio signal and information relating to a location of the mobile radio terminal.

82. (New) The mobile radio terminal of claim 81, wherein said reception quality and said intensity of the radio signal comprises a received signal quality and a received signal intensity of a common pilot channel.

83. (New) The method of claim 1, wherein said sent information further includes time information.

84. (New) The method of claim 1, wherein said sending information occurs only from users who have provided consent for such information sending such that dedicated software has been installed only on mobile radio terminals of consenting users.

85. (New) The method of claim 84, further comprising transmitting valuable points as consideration to users sending information to said information collecting server.

86. (New) The method of claim 1, wherein said information collecting server transmits said trigger so that a plurality of mobile radio terminals simultaneously start measuring information and sending the measured information to the information collecting sever.

87. (New) The method of claim 1, wherein said predetermined criteria include at least one of signal loss and a lowering of said signal reception.

88. (New) The method of claim 1, wherein said predetermined criteria allow for a mapping of said service area of said system.

89. (New) The method of claim 1, wherein said predetermined criteria allow for other than a handoff operation for the mobile radio terminal.